

CHEMISTRY THAT MATTERS™



LNPT™ SLX COPOLYMER RESINS FOR AUTOMOTIVE EXTERIORS

SABIC'S SPECIALTIES BUSINESS



LNP™ SLX COPOLYMER RESINS

Weatherable molded-in colored solutions for automotive exteriors

Visual appearance and surface aesthetics are crucial to automotive OEMs seeking to differentiate their vehicles with a signature style.

In addition to aesthetics, OEMs are searching for material options that can help reduce total system costs. As a result, there is an ongoing trend to transition from painted parts to molded-in-color parts that help to achieve quality and visual appeal, while reducing manufacturing costs and complexity from secondary operations.



Designers and engineers seek material solutions that feature:



Potential total system cost reduction through paint replacement



Toughness for assembly and end use: mechanical property retention upon UV exposure



High aesthetics, high gloss, molded-in color solutions



Chemical resistance to typical automotive exterior chemicals



Outdoor weatherability: Color and gloss retention upon long term UV exposure



Scratch and mar performance based on application requirements

Unique SLX Technology

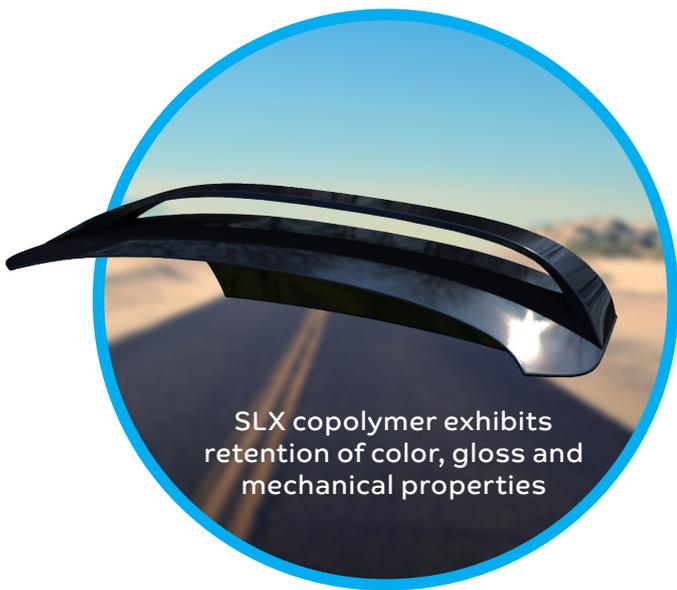
SLX copolymers are **weatherable polycarbonate copolymers** that react with UV light to form a protective, UV absorbing layer. This self-renewing layer provides a continuous protective barrier versus the traditional approach to utilize UV additives to protect the polycarbonate resin.



IMPLICATIONS OF WEATHERING

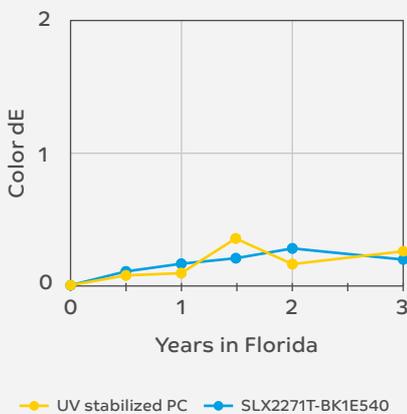
Outdoor materials encounter a host of environmental stresses. Weathering is caused by the negative consequences of UV radiation, exposure to heat, moisture, and debris. SABIC's SLX copolymer technology provides excellent aesthetic and physical property retention upon long term UV exposure compared to standard polycarbonate.

Simulated appearance renderings demonstrating 3-year outdoor weathering: SLX copolymer vs. standard PC



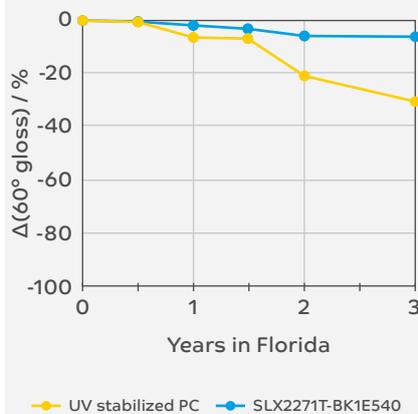
LOW COLOR SHIFT

Retention of initial color gloss during part lifetime



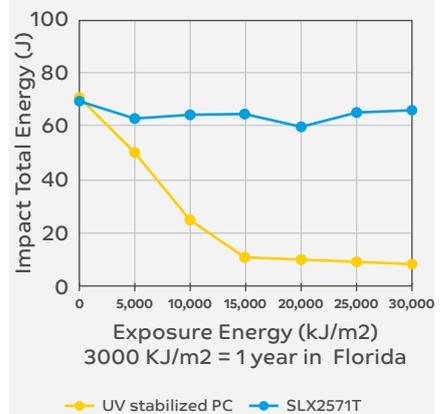
GLOSS RETENTION

Retention of high initial gloss during part lifetime



TOUGHNESS & DURABILITY

Impact and physical property retention under long term UV exposure



POTENTIAL SOLUTION FOR TOTAL VEHICLE EXTERIOR APPLICATIONS

Rear Spoiler

Weatherability, impact and chemical resistance

Appliques

Weatherability, impact and chemical resistance

Mirror Assembly

Impact and chemical resistance

Trim

Molded-in color, weatherability

Emblems/ Plinth Carriers

Aesthetics, diffusive lighting options, weatherability

Fog Lamp Covers

Aesthetics, impact and chemical resistance

Front Grille – Lower

Impact resistance, scratch, mar, chemical resistance, high gloss, IR black transparency for camera and LiDAR components

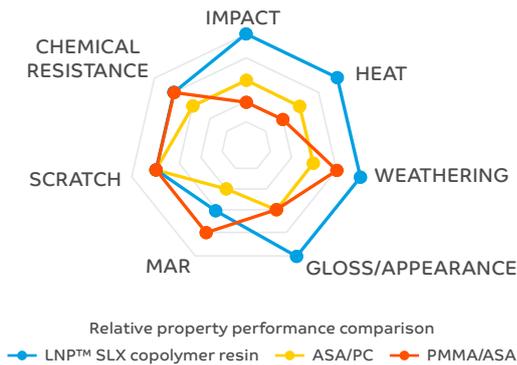
Front Grille – Upper & Surround

Weatherability, high gloss, impact and chemical resistance



MATERIAL LANDSCAPE

LNP™ SLX Copolymer Resins offer material property advantages compared to alternative resins such as PMMA and ASA blends.



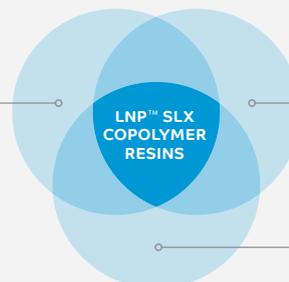
LNP™ SLX COPOLYMER RESINS PORTFOLIO

Weatherable LNP™ SLX Copolymers	MFR	Resin Code	Properties
High UV performance	25 MFR	SLX2291T	High flow
	17 MFR	SLX9271T	V0/3.0mm, V2/1.0mm
		SLX2271T	V2/1.0mm, f2
Excellent UV performance	10 MFR	SLX2471T	V2/1.5mm, f1
	10 MFR	SLX2432T	V2/1.5mm, f1
		SLX1432	HB, f1

LNP™ SLX Copolymer Resins vs. PMMA and ASA blends

- Higher initial gloss
- Improved depth of color
- Higher thermal performance
- Higher impact strength
- Improved weathering
- Retention of gloss

PHYSICAL PROPERTIES



WEATHERABILITY

AESTHETICS

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